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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/416,910      | 10/13/1999  | SIMON JOSHUA JACOBS  | TI-28505            | 6758             |

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EXAMINER

THEXTON, MATTHEW

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1714

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DATE MAILED: 04/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                |                                      |  |
|------------------------------|--------------------------------|--------------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>09/416,910  | Applicant(s)<br>JACOBS, SIMON JOSHUA |  |
|                              | Examiner<br>Matthew A. Thexton | Art Unit<br>1714                     |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 February 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-53 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
     If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
     a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 32-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 32-34 recite the limitation "said conditioning step" in the first line. There is insufficient antecedent basis for this limitation in the claim. It appears these claims should depend from claim 28.

Claims 1-53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

While applicant may be his or her own lexicographer, a term in a claim may not be given a meaning repugnant to the usual meaning of that term. See *In re Hill*, 161 F.2d 367, 73 USPQ 482 (CCPA 1947). The term "compound" in claims 1-42 is used by the claim to mean "material" or "composition of matter" or "mixture," while the accepted meaning is "unique chemical." While it is a term of art to describe "compounding" or "formulating" a mixture, it is thought that applicant's choice of terminology introduces some ambiguity.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-53 are rejected under 35 U.S.C. 103(a) as being obvious over Klonis, et al. (US 5939785) in view of Matsuoka, et al. (JP60129139A), as understood from the translation, and Shores (US 5591379).

The reference, Klonis, et al., has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(I)(1) and § 706.02(I)(2).

The Klonis reference discloses all of the features of the claims including the device and methods of preparing with the exception of: (1) Klonis suggests a polymer generally and a sole species polyvinyl butyral specifically for a binder; (2) Klonis suggests a desiccant generally and "an alumino-silicate" specifically; and (3) Klonis does not provide any guidance for proportions of desiccant to polymer.

The claims require (1) polymer binder selected from the group consisting of polysaccharides, polyamines, polysulfones, and polyamides, (2) dependent claims require the desiccant/drying agent is molecular sieve (claims 2, 15) or zeolite (claims 3, 16), and (3) a proportion of desiccant relative to polymer at a ratio of from 2.1 to 100.

JP '139 discloses desiccant compositions for electronic devices comprising zeolite and heat resistant polymer (urethane resin or polyvinyl alcohol) in a weight proportion of zeolite to polymer of from 3 to 4 (page 3 of translation). It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the desiccant of JP'139 in the particular electronics devices disclosed by Klonis because the two references are solving the same problems and use of the zeolite/urethane composition would obtain the benefits described in JP'139.

Shores discloses desiccant compositions comprising zeolite and polymer binder for hermetically sealed electronic devices, wherein the polymer may be polysulfone, polyurethane (column 3, lines 52- 57) in a proportion of zeolite to polymer of from 0.002 to 2 by volume. One of ordinary skill in the art at the time of the invention would have found it obvious to employ the polymers suggested by Shores as a viable substitute for the polymers of Klonis or Klonis in view of JP'139 because it solves the same problem

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and offers the benefits described, in particular to be effective at high conditioning and operating temperatures for the zeolite and the electronic equipment, which is also a goal of both Klonis and JP '139.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-53 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 5939785 (Klonis, et al.) in view of Matsuoka, et al. (JP60129139A), as understood by the translation, and Shores (US 5591379).

For the sake of brevity, the immediately preceding rejection under 35 USC 103(a) is incorporated here by reference thereto.

### ***Claim Rejections - 35 USC § 103***

Claims 1-10, 14-23, 27, 31,32, 35-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallace, et al. (US 5610438) in view of Matsuoka, et al. (JP60129139A), as understood by the translation, and Shores (US 5591379).

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Wallace discloses the micromechanical device and the water getter and the passivating technique using a monomolecular layer of PFDA. The water getter is different from the claims in that the non-evaporable getter is a metal or metal alloy. Likewise, the methods of assembling and activating the device with this getter are specific to this type of getter.

JP '139 discloses desiccant compositions for electronic devices comprising zeolite and heat resistant polymer urethane resin in a weight proportion of zeolite to polymer of from 3 to 4. It would have been obvious to one of ordinary skill in the art at the time of the invention to employ zeolite in a binder (urethane is a polyamide) as a viable substitute for the metal getter of Wallace because it solves the same problem and offers the benefits described including flexible handling characteristics, or may be considered an equivalent in utility and therefore selected for ordinary economic or engineering considerations.

Shores discloses desiccant compositions comprising zeolite and polymer binder for hermetically sealed electronic devices, wherein the polymer may be polysulfone, polyurethane (column 3, lines 52- 57) in a proportion of zeolite to polymer of from 0.002 to 2 by volume. One of ordinary skill in the art at the time of the invention would have found it obvious to employ the polymers suggested by Shores as a viable substitute for the metal getter of Wallace or the getter combination of Wallace in view of JP'139 because it solves the same problem and offers the benefits described, in particular to be effective at high conditioning and operating temperatures for the zeolite and the electronic equipment, which is also a goal of both Wallace and JP '139.

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The method steps of preparing these types of desiccant mixtures comprising polymer and desiccant agent and incorporating them into electronic equipment are well known.

### ***Citation of Pertinent Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Grabbe (US 4426769) discloses desiccant for sealed electronics comprising polyamides chosen for their ability to withstand very high operating temperatures (i.e., 500 C), have high microporosity, and to support high amounts of water.

Plachenov, et al. (US 3704806) discloses desiccant compositions for packaging electronics comprising zeolite and thermosetting polymer. The proportion of desiccant to polymer are from 1.5 to 0.2.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew A. Thexton whose telephone number is 703-305-5085. The examiner can normally be reached on Monday-Friday, 8:30 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasudevan S Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.



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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5665.



Matthew A. Thexton  
Primary Examiner  
Art Unit 1714

March 27, 2003